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Day 5 Practice Problems

Use Random Function *((RANDOM))* to get Single Digit

```
num1=$(($RANDOM%9));
echo "$num1"
```

Use Random to get Dice Number between 1 to 6

```
num1=$(($RANDOM%6+1));
echo "$num1"
```

Add two Random Dice Number and Print the Result

```
num1=$(($RANDOM %6));
num2=$(($RANDOM % 6));
sum=$((num1+num2))
echo "$sum"
```

Write a program that reads 5 random 2 digit values , then find their sum and the average

```
num1=$(($RANDOM %99 + 10));
num2=$(($RANDOM %99 + 10));
num3=$(($RANDOM %99 + 10));
num4=$(($RANDOM %99 + 10));
num5=$(($RANDOM %99 + 10));


sum=$((num1+num2+num3+num4+num5))
avg=$(((num1+num2+num3+num4+num5)/5))
echo "Sum: $sum “
echo ” Average: $avg"
```

Unit Conversion

a. 1ft = 12 in then 42 in = ? ft

```
num=12

result=$(($num*42))

echo "$result"
```

b. Rectangular Plot of 60 feet x 40 feet in meters

```
areaOfRectangle=$((60*40))

meter=0.3048

echo "$areaOfRectangle $meter" | awk '{print $1 * $2}'
```

Write a program that reads 5 Random 3 Digit values and then outputs the minimum and the maximum value

```
#! /bin/bash

a=$(($RANDOM %999 + 100));
b=$(($RANDOM %999 + 100));
c=$(($RANDOM %999 + 100));
d=$(($RANDOM %999 + 100));
e=$(($RANDOM %999 + 100));
echo "$a $b $c $d $e"

if [ $a -eq $b -a $a -eq $c -a $a -eq $d -a $a -eq $e ]; then
   echo "All the five numbers are equal"
else
   if [ $a -gt $b -a $a -gt $c -a $a -gt $d -a $a -gt $e ]; then
      echo "$a is biggest number"
   elif [ $b -gt $a -a $b -gt $c -a $b -gt $d -a $b -gt $e ]; then
      echo "$b is biggest number"
   elif [ $c -gt $a -a $c -gt $b -a $c -gt $d -a $c -gt $e ]; then
```

```
        echo "$c is biggest number"
    elif [ $d -gt $a -a $d -gt $b -a $d -gt $c -a $d -gt $e ]; then
        echo "$d is biggest number"
    elif [ $e -gt $a -a $e -gt $b -a $e -gt $c -a $e -gt $d ]; then
        echo "$e is biggest number"
    fi
fi
```

Write a program that takes day and month from the command line and prints true if day of month is between March 20 and June 20, false otherwise.

```
read -p " Enter Date:-" date
read -p " Enter Month:-" month

if(( ($month >=3 && $date <= 20) && ($month <=6 && $date <= 20)))
then
        echo "True";
else
        echo "False";
fi
```

Write a program that takes a year as input and outputs the Year is a Leap Year or not a Leap Year. A Leap Year checks for 4 Digit Number, Divisible by 4 and not 100 unless divisible by 400.

```
#! /bin/bash

read -p " Enter Year:-" year


if(( ($year%4 == 0)&&($year%100 != 0) || ($year%400 == 0)))
then
        echo "Leap Year";
else
        echo "Not a leap Year";
fi
```

Write a program to simulate a coin flip and print out "Heads" or "Tails" accordingly.

```
side=$(($RANDOM%2 + 1));

if(($side > 1))
then
        echo "Heads"
else
        echo "Tails"
fi
```

Read a single digit number and write the number in word

```
read -p "Enter the digit: " n

case $n in
        1)
         echo "one"
         ;;
        2)
         echo "two"
         ;;
        3)
         echo "three"
         ;;
        4)
         echo "four"
         ;;
        5)
         echo "five"
         ;;
        6)
         echo "six"
         ;;
        7)
         echo "seven"
         ;;
        8)
         echo "eight"
         ;;
```

```
        9)
         echo "nine"
         ;;
        *)
          Default condition
         ;;
esac
```

Read a Number and Display the week day (Sunday, Monday,…)

```
read -p "Enter the Weekday Number: " n

case $n in
        1)
         echo "Sunday"
         ;;
        2)
         echo "Monday"
         ;;
        3)
         echo "Tuesday"
         ;;
        4)
         echo "Wednesday"
         ;;
        5)
         echo "Thursday"
         ;;
        6)
         echo "Friday"
         ;;
        7)
         echo "Saturday"
         ;;
        *)
          Default condition
         ;;
esac
```

Number 1, 10, 100, 1000, etc and display unit, ten, hundred,…

```
read -p "Enter the Number: " n

case $n in
        1)
         echo "Units"
         ;;
        10)
         echo "Tens"
         ;;
        100)
         echo "Hundred"
         ;;
        1000)
         echo "Thousand"
         ;;
        *)
          Default condition
         ;;
esac
```

Write a program that takes User Inputs and does Unit Conversion of

```
echo "1) Feet to Inch"
echo "2) Inch to Feet"
echo "3) Feet to Meter"
echo "4) Meter to Feet"

read -p "Enter unit conversion choice: " n
read -p "Enter the number  to be converted: " i

case $n in
        1)
         inch=$(($i*12))
         echo "Feet to Inch: $inch"
         ;;
        2)
         base=0.0833
         echo "Inch to Feet: "
         echo "$i $base" | awk '{print $1 * $2}'
```

```
        ;;
      3)
        base=0.3048
        echo "Feet to Meter: "
        echo "$i $base" | awk '{print $1 * $2}'
        ;;
      4)
        base=3.2808
        echo "Meter to Feet: "
        echo "$i $base" | awk '{print $1 * $2}'
        ;;
      *)
        Default condition
        ;;
esac
```